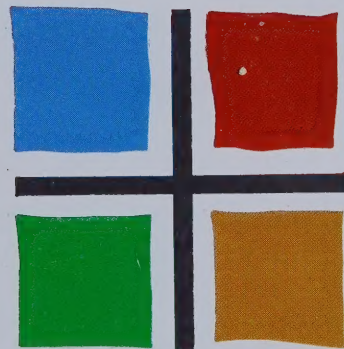


AR43

MAR 16 1964

file

CLEVITE



Annual Report 1963

Financial highlights of the year

1963 PER SHARE EARNINGS

1st Quarter .75	3rd Quarter .71
2nd Quarter .99	4th Quarter 1.12

	1963	1962
Revenues	\$105,340,788	\$101,175,033
Income before income taxes	14,177,297	12,782,236
Earnings	6,927,297	6,562,236
Percent of earnings to:		
Revenues	6.6%	6.5%
Shareholders' investment	11.5	11.5
Per common share outstanding:		
Earnings	3.57	3.38
Dividends—cash	1.40	1.40
Dividends—stock	2%	—
Taxes	4.74	4.12
Book value	31.33	29.21
Capital additions	5,774,448	6,320,387
Depreciation	4,255,102	4,332,675
Net working capital	33,737,129	31,751,245
Employees	7,313	7,145
Stockholders	7,716	7,410

To owners, employees and friends of Clevite:

Clevite's revenues and earnings set all-time records in 1963.

Revenues totaled \$105,340,788, compared with \$101,175,033 in 1962. Earnings rose to \$3.57 per share outstanding, compared with \$3.38 per share in 1962.

Particular credit for these results is due to the outstanding performance of our bearing divisions, each of which increased market penetration in a year when automotive sales reached a new high; and to our instruments division, which continued its forward progress in spite of increasingly competitive conditions.

We had problems, too, in 1963. Our domestic semiconductor business continued to struggle against the highly competitive conditions in that industry, and went through an extensive reorganization designed to bring its performance to a satisfactory level. Our piezoelectric division also experienced a difficult year, and it, too, went through internal readjustments. I am happy to say that both of these divisions are making progress.

Dividends declared during 1963 increased for the fourth consecutive year. Cash payments of \$1.40 were made, and an extra dividend of 2% in stock was declared. Consideration will be given to modest annual stock dividends so long as this remains consistent with the best interests of the company and its shareholders.

Clevite is beginning to be known in many parts of the world. As detailed later in the

report, we made a number of moves to make our products available in various growth markets abroad, and we are placing emphasis on our international expansion programs.

Considerable progress was made in strengthening our management organization. We have a loyal, experienced and intelligent group of management executives, bound to us, I believe, by a conviction that Clevite will have an increasingly important position in the world industrial scene.

There are good reasons to be optimistic about 1964. Those units which turned in strong performances in 1963 should do so again and our semiconductor and piezoelectric units should be able to improve considerably upon last year's results.

We are expecting another fine year in both sales and earnings, and further progress in building our fundamental strengths in technology, production, marketing and management.

* * * *

Mr. Glen O. Smith has announced his intention not to stand for re-election as a director at the forthcoming annual meeting. He has been actively associated with the affairs of the company for over 35 years, first as legal adviser, as secretary from 1940 to 1948, and since 1948 as a director. He has contributed much to the people of Clevite and we are deeply indebted to him.

William E. Laffer
President

Analysis

of operations

Clevite's revenues in 1963 set a record of \$105,340,788, compared with \$101,175,033 in 1962.

Earnings were \$6,927,297 or \$3.57 per share outstanding, compared with \$6,562,236 or \$3.38 per share earned in the previous year. The former record of \$3.53 per share was set in 1960.

We continued to invest substantial sums in capital additions — new and better equipment, and additions to our buildings. Major programs were undertaken at several of our domestic plants, and moderate sums were invested in new operations abroad. Total expenditures were \$5,774,448, compared with \$6,320,387 in 1962.

Depreciation for the year amounted to \$4,255,102. Cash flow — earnings plus non-cash charges such as depreciation — exceeded \$10,000,000 as it has in three of the last four years.

At year end, the company was in good financial condition, with net working capital of \$33,737,129 and a ratio of current assets to current liabilities of 3.3 to 1. Long-term debt decreased for the twelfth consecutive year, and at the end of 1963 the balance outstanding was less than one-half the \$15,000,000 originally borrowed in 1951-52.

Best Year In Bearings—

We enjoyed our most successful year in sales of sleeve bearings.*

The strong performance of our bearing units resulted from a combination of cir-

*Clevite bearings are of a type commonly known as "sleeve" bearings, in contrast to ball or roller bearings. In typical applications, they are fitted around an automobile crankshaft, connecting rod or camshaft, providing support and forming a sleeve within which the shaft can turn smoothly.

cumstances—record industrial production, continued growth in replacement markets, increased market penetration and a good contribution from newer product lines.

Displaying its basic underlying strength, the automotive industry surged to new high levels during 1963. Sales of domestically manufactured vehicles surpassed all previous records. Other original equipment markets such as the farm equipment and appliance industries were also active. Estimates for 1964 indicate that production in our principal markets should remain high.

Sales of our high-precision seals for rocket engines and pumps increased. They have been used in most of the satellite and manned space flights conducted by the U.S. Government. We also make lead-free copper foil, used for printed circuits in electronic equipment. At year-end our domestic copper foil lines were running at capacity, and our material was in use or under test by every major consumer in the country. Both of these products contributed to the fine record of our bearing plants in 1963.

In order to meet growing needs, we spent substantial sums of money to maintain the excellent condition of our plants and to increase their production efficiency. An entirely new production control system was installed at our automotive bearing plant in Cleveland. It has three major features—continuous reporting on the performance of every production machine; communication links between the control room and each foreman through the use of telephones and portable radios; and electronic equipment which keeps detailed production records. The installation is expected to pay for itself in approximately one year.

Toward the end of the year we installed

an advanced type of computer at our Cleveland plant. It provides much greater capacity, versatility and speed than the computer it replaced. It is particularly useful for engineering work, as well as financial, payroll and inventory control applications.

A new bearing plant is being planned in Bridgeport, Ohio, to replace our existing facility in that community. Scheduled for completion during 1964, it will provide a significant increase in total capacity for bearing production.

Sales of our Canadian bearing subsidiary set a record, as they have each year since 1954. Sales of original equipment bearings increased, and progress was made in the marketing of bearings for replacement use. Also contributing to our growth in the Dominion were higher sales of powdered metal parts. Capacity for making these parts was increased by installation of additional high-tonnage, high-speed presses. Sales of rubber-and-metal parts in Canada also rose.

Our Canadian factory was expanded by 25% during the year to handle the growing volume of business. In addition, early in 1964, we purchased an adjoining tract of land and factory building which more than doubled our acreage and increased floor space available for operations by 50%.

New Markets in Other Countries—

While the demand for bearings in the U.S. and Canada should grow steadily, the market potential in many other countries is equally attractive. For this reason we have been participating actively in the establishment of bearing manufacturing plants in other parts of the world.

We have taken initial steps to acquire

bearing manufacturing facilities in the European Economic Community. Some observers feel that the E.E.C. has a greater growth potential than any other world market.

Two new overseas companies (in both of which we have substantial minority interests) went into operation in 1963. One is located in India, where the automotive market is expected to show good long-term growth. The second, near Tokyo, serves the rapidly expanding Japanese auto market.

Our bearing operation in Mexico showed moderate growth during the year. It was established to supply replacement bearings and will be in an advantageous position to manufacture original equipment bearings when automotive manufacturing commences in that country later this year.

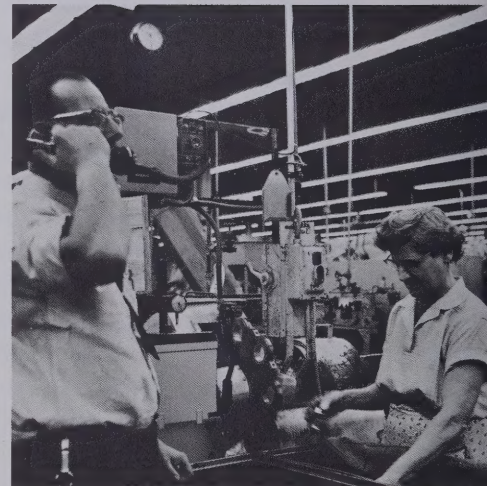
Replacement Bearings—Up Again—

The replacement bearing market in the United States continued its steady growth. New warehouse facilities, in use for the first full year, were a significant factor in enabling us to improve our customer service.

Replacement bearings, used in rebuilding and repairing engines, are an increasingly important source of strength for Clevite. In addition to use in automobiles and trucks, Clevite's replacement bearings are used widely in diesel locomotives, aircraft, agricultural equipment, road building machinery, pumps, generators and other types of power equipment. In 1963, over \$22 million of our total bearing sales were made to replacement markets.

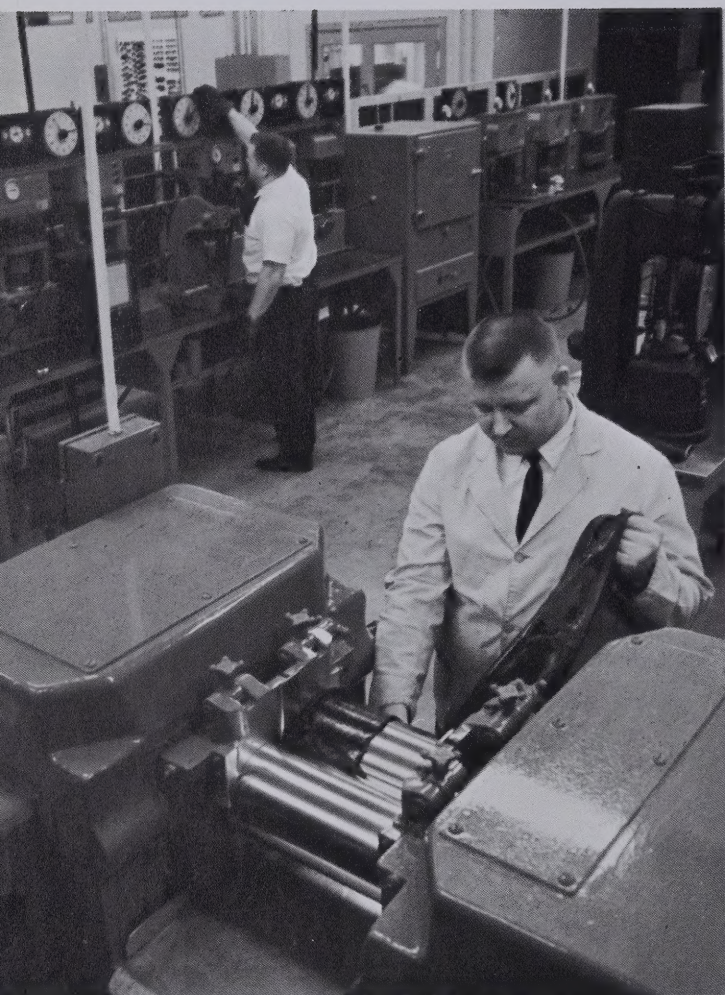
These markets offer opportunity for major growth since the number of vehicles and other pieces of equipment requiring sleeve bearings continues to grow rapidly. Equally important, they provide stability during periods of economic recession.

We have launched a program to make



A foreman reports completion of a bearing machining run at our main plant in Cleveland. His report is taken in the Shoptrol control room, pictured on the right-hand page, where automotive bearing operations are monitored continuously.





A technician processes a sample of rubber in the new engineering laboratory added as part of a \$1,250,000 expansion at our Milan, Ohio plant.

our replacement bearings more widely available in world markets. Our overseas marketing programs have so far concentrated on the relatively few makes of passenger cars and light trucks which represent the major portion of vehicles made outside the United States. Eventually we plan to offer replacement bearings for most foreign-made vehicles.

Increased Market Penetration With Rubber-And-Metal Parts—

Sales of rubber-and-metal parts—used to reduce vibration and eliminate lubrication in automotive suspension systems and in other industrial applications—expanded substantially, and by year end we were operating our plants around-the-clock. This increase in volume resulted not only from record automotive production but also from a substantial increase in market penetration.

We made important contributions to the appliance industry with three new applications of our rubber-and-metal products.

A 60% expansion of the Milan, Ohio plant has been completed. New machinery is now being installed.

New products with promising sales potential were introduced during the year. Among these were our polyurethane-and-metal Clevebloc®, a modification of one of our standard automotive suspension products.

Newest Division Completes Busy Year—

Clevite's Aerospace Division, established in 1963 to exploit our experience and know-how in specialized powder metallurgy, has expanded rapidly. At the end of the year, the division had a substantial backlog of orders for controlled permeability electrodes

for fuel cells*, and was also working on other projects, including high-density titanium shapes.

The major work of the division has been done under a contract to supply fuel cell electrodes for the command and service module of the Apollo man-to-the-moon project. Toward the end of the year, the division received an additional electrode contract for the Lunar Excursion Module (LEM), which is also a part of the Apollo program.

The division is completing a building addition which will almost double its floor space. It is also leasing or purchasing a substantial amount of new production equipment, including additional furnaces, pressing equipment and electron-beam welding machines. The new facilities are expected to be in operation by March, 1964.

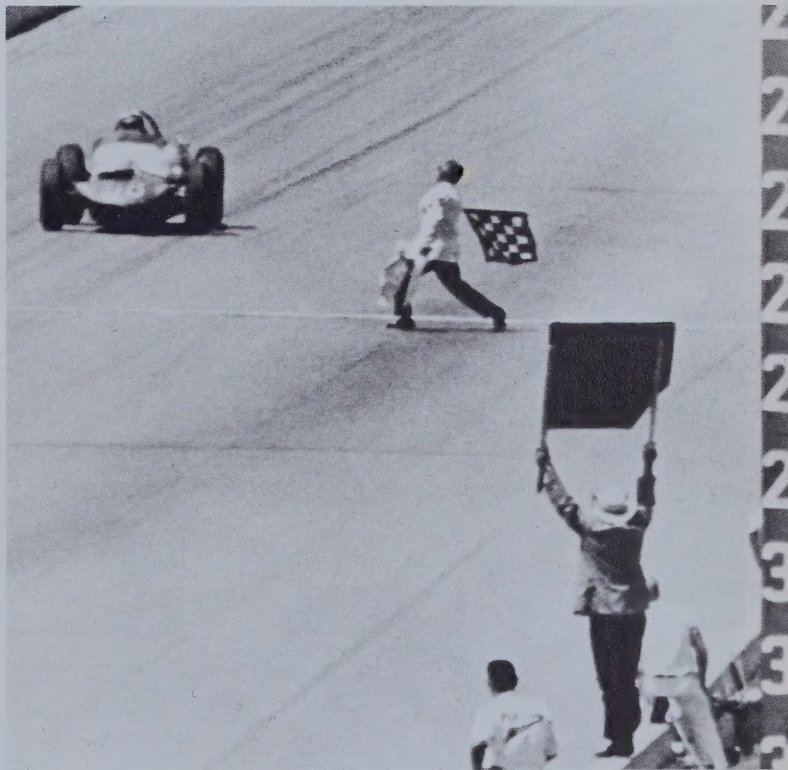
A major objective of the division is to develop commercial applications for controlled permeability materials in order to provide a broader market base.

Semiconductor Operation Reorganized —

We reorganized our semiconductor** operations last fall. Tangible benefits are already being realized. Manufacturing efficiency has been improved and our marketing programs strengthened. In

*Fuel cells are devices designed to convert chemical energy into electrical energy directly. Such cells will be used in the Apollo moon craft to supply electrical energy for all control, guidance and internal power requirements, and also to produce, as a by-product, drinking water for the three men who will man the craft.

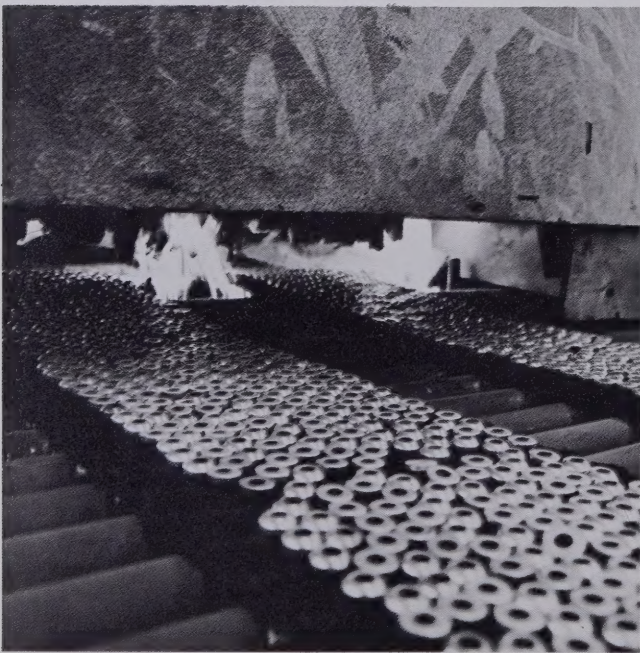
**Semiconductors (transistors and diodes) are devices usually made of silicon or germanium which, because of their unusual properties, can control electrical energy in many ways. Frequently used as miniature substitutes for vacuum tubes, they can act as switches, amplifiers, and rectifiers (changing alternating current to direct current).



Parnelli Jones (and Clevite bearings) take the checkered flag at the 1963 Indianapolis 500. Once again, every car in the race used our engine bearings.



A Clevite fuel cell electrode gets a final scrutiny under special lighting before being passed for shipment.



Powdered metal products by the thousands flow through a heat treating line at our plant in St. Thomas, Ontario.

addition, we have been able to speed the development of new products with immediate market potential, and to improve coordination among the various sections of our semiconductor operation.

Our semiconductor subsidiary in Freiburg, Germany, turned in another good performance, with overall results the best in the past six years. The increasing volume of business in France led to opening of our first sales office in that country, near Paris.

Several promising new semiconductor products were developed during 1963. In the domestic market, we introduced a high-frequency silicon power transistor, an advanced-technology product with unique electrical characteristics and attractive sales potential; a planar zener diode which broadens our line of zener devices; and a three-layer trigger diode, used in light dimmers and other applications.

In the foreign market, our German subsidiary introduced a new silicon epitaxial planar transistor, for use in machine tool control systems, in data handling and communications apparatus, and in equipment for the regulation of electrical power supply systems. They also introduced a very small transistor of particular interest for hearing aids, electronic wristwatches, and other compact, lightweight electronic equipment such as personal paging systems.

Readjustments In Our Piezoelectric Business—

Operating results of our domestic piezoelectric* business were less satisfactory than

*Piezoelectric materials have the unusual property of converting mechanical energy into electrical energy, or the reverse, in direct proportion to the energy applied. They will generate electrical energy when squeezed, bent or twisted, or, when electrical energy is applied to them, they will change their shape.

in 1962. Prices were reduced as markets became increasingly competitive, and sales volume in some product lines was lower.

Programs to counter these conditions were directed toward improved production efficiency and more effective marketing efforts. The internal organization of the division was realigned.

During 1963, we were again chosen as the source of piezoelectric transducer* elements for the nuclear attack submarine sonar systems. Orders for advanced sonar compo-

nents for surface warships were also received.

We entered a joint venture with a Japanese manufacturer to design and develop

*Transducers change energy from one form to another. Clevite transducers utilize the piezoelectric effect to change mechanical energy into electrical energy, or the reverse. In underwater exploration and warfare a major transducer function is to send or receive sound waves which measure such things as water depth and the distance to underwater objects. In industry, transducers are used in many applications such as ultrasonic cleaning and non-destructive testing.



Diode assembly operations at our semiconductor plant in Freiburg, Germany. Nineteen sixty-three was its best year.



Precision optical gauging is used to check the curving contours of a mold used to produce the piezoelectric ceramic components pictured above.



a piezoelectric ignition device for internal combustion engines. The objective is development of a simple, reliable ignition system, which would have broad application in Asia where small engines are widely used for cultivation and irrigation purposes.

Our piezoelectric licensing program was further expanded through patent agreements with two leading Japanese component manufacturers. Under our over-all corporate licensing policy, rights to the patents are granted but no exchange of know-how or technical guidance is provided without ownership participation. As the world's leader in the piezoelectric field, we stand to gain from any broad expansion of the use of these materials.

Growth In England—

Our majority-owned electronics subsidiary in Southampton, England, had a good year, with a significant upturn in sales and operating income in the final quarter. The company enjoys a position of leadership in England in piezoelectric materials.

A long-existing problem at the company—that of obtaining modern, well-laid-out facilities—has now been solved. Late in the year the British government approved a move to a new facility to be built in another section of Southampton. Construction is scheduled to start in April.

The company's management has been strengthened. New equipment has been purchased. Sales activities have been expanded by opening an office in Paris and appointing sales agents in other European countries.

A Banner Year For Instruments —

Despite strong competition, our instruments division worked a six-day week most of the year.



The structure of a natural quartz crystal is examined under special lighting—a preliminary step in the production of quartz components for radio frequency control at our Southampton, England plant.





Left: Pen action of a Mark 200 direct-writing oscillograph is examined during final assembly. Above: 38 of the completed units are lined up before shipment. They are part of an order for 108 instruments for the new telemetry building at Cape Kennedy.

Clevite offers the broadest range of high-precision oscillographs available. All of them serve the same basic purpose—to make permanent, visible records of virtually any physical phenomena—ranging from the heartbeat, blood pressure, respiration and body temperature of an astronaut orbiting the earth, to the vibration of an automobile engine.

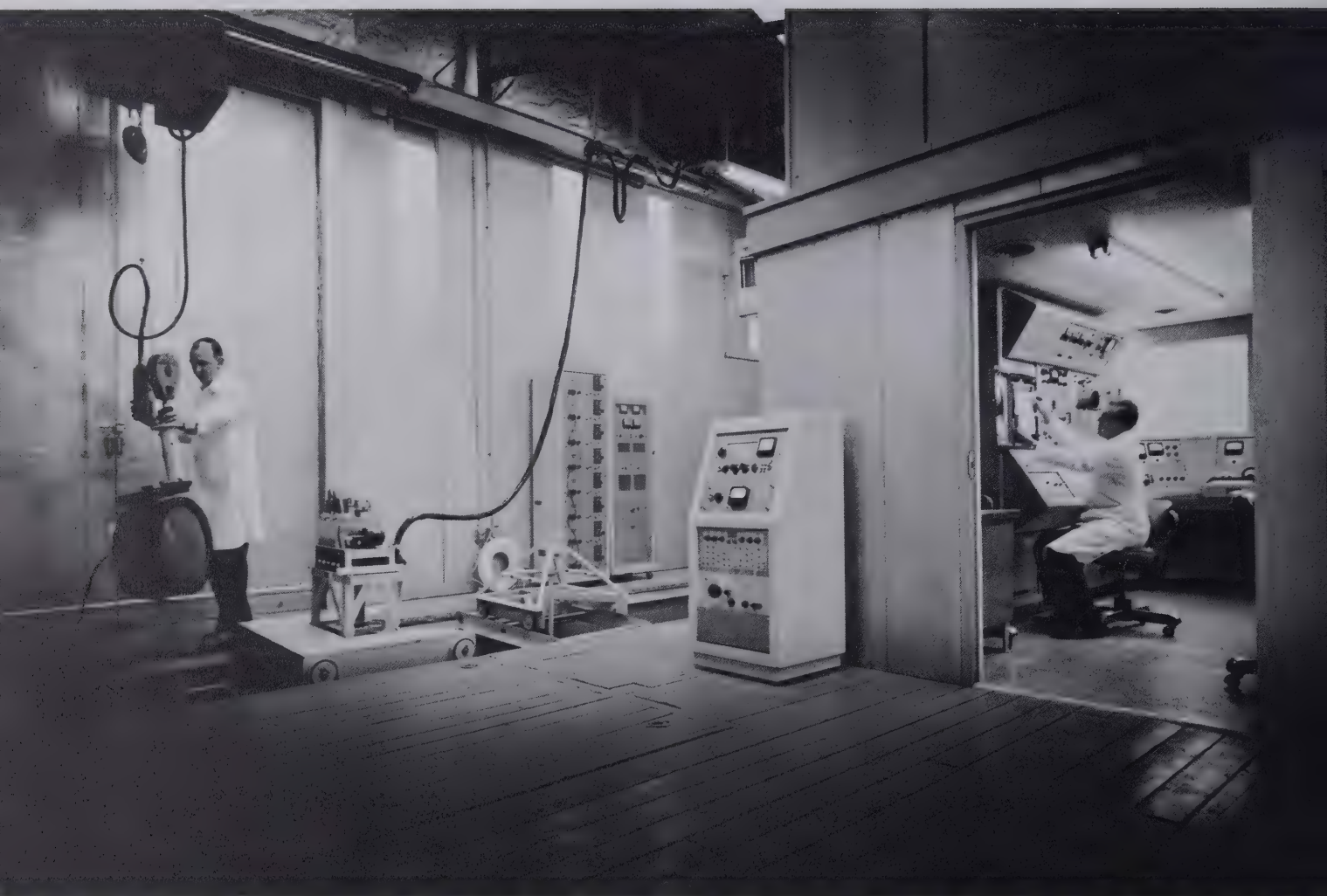
One of the most dramatic events in the history of our instrument business was announced in the third quarter as orders were received for a total of 108 Clevite Mark 200 direct writing recorders to be used in the new Telemetry 4 building at Cape Kennedy. Selected after the most demanding evaluation, the recorders will be used for instantaneous display of the hundreds of events which must be monitored during a missile launch.

Nineteen sixty-three was notable also for the introduction of new types of instruments. These include our new light-beam oscillograph, which opens up a large portion of the instrument market not previously available to us, and our Mark 280 recorder, which provides a combination of accuracy and width and clarity of trace not available in any other competitive instrument.

Additional production space was provided toward year-end to accommodate rapidly rising customer demand for our instruments.

Major Developments In Underwater Ordnance—

A large portion of the energies of our underwater ordnance staff was devoted to a program definition study for the Department of Defense in connection with the EX-10, a new torpedo which could be the most advanced weapon in this country's naval arsenal. Clevite was one of two bidders selected to conduct these studies,



An experimental sonar transducer, designed as part of our work on the EX-10 torpedo contract, is lowered into the water at our Columbia Station, Ohio test facility as equipment to monitor its performance characteristics is checked out.

following competition with more than 30 other companies. After the program definition studies have been evaluated, it is expected that a development contract of major proportions will be let to one of the two bidders.

During the year we supplied substantial quantities of Clevite's unique torpedo

engine. We expect further orders for this engine as well as for a higher-powered version which was developed during 1963. Work was also begun on the development of a new Mark 46 antisubmarine torpedo under contract with the U.S. Navy.

We made full use of our underwater testing installation which was completed

early in 1963, at Columbia Station, Ohio. This facility permits us to run tests in explosion-proof bunkers under simulated deep-sea pressure conditions. It has proved of major value in development of the new torpedo engine as well as in other related studies.

Marketing Activities Stepped Up—

We took a series of steps to strengthen marketing programs. A corporate marketing department was established as a top management function. Among its principal duties will be development of market research studies, coordination of the promotional activities of all of our manufacturing units, and advice on research and new product development programs. A corporate advertising program has been initiated to describe the capabilities and facilities of all of our units.

Combined sales offices have been established in Detroit, New York and Washington and similar offices are being planned in other cities.

Clevite Research and Development—

Research activities were maintained at high levels during 1963. Emphasis was placed on projects aimed at improving existing products or adding new ones which fit in with Clevite's capabilities.

We employed some 140 scientists and technical assistants at our Cleveland and Palo Alto research organizations in addition to a sizable number of research and development people attached directly to the various operating divisions. Research and development expenditures for 1963 totaled \$7,400,000 of which approximately \$3,500,000 was reimbursed, mainly through government contract research. Total re-

search expenditure represented 7% of sales, as compared with a national average of approximately 4½% for all manufacturing concerns.

Employee Relations Continue Good—

In 1963 we paid a record \$46,733,568 in wages, salaries and employee benefits. Our pay scales, fringe benefits and over-all working conditions are equal to or better than those of competitive companies in our plant areas. We are convinced that this more than pays for itself in improved employee loyalty, effort and reduced turnover.

Our day-to-day contacts with unions representing employees were conducted in a spirit of harmony and cooperation. We had no lost time due to strikes.

New three-year contracts were negotiated at the Bridgeport, Ohio, plant of Cleveland Graphite Bronze Division and at both plants of Clevite Harris Products. The only contract expiring in 1964 is the one covering employees at our Piezoelectric Division.

Management Team Strengthened—

We stressed earlier that Clevite's management group is one of its major strengths. Major promotions and organizational changes during the year included the following;

William D. Cameron, a vice president of the corporation, was assigned overall responsibility for the Aerospace Division, Cleveland Graphite Bronze Division (the company's largest), Clevite Harris Products, Inc., and Clevite Limited. He was also made responsible for overseas bearing manufacturing operations. Prior to joining Clevite as general manager of Cleveland Graphite Bronze, he had been a

manufacturing and engineering executive with one of the large automobile companies.

William H. Martin, a veteran of 21 years with Clevite, was appointed general manager of Cleveland Graphite Bronze. During the preceding six years he headed Clevite Limited, which set a sales record each year under his guidance.

Matthew J. Fleming, Jr. was named general manager and vice president of Clevite Limited. During his 23 years with Clevite, he has managed two of our bearing plants, headed Clevite Harris Products, Inc., and served on special assignment with our Semiconductor Division.

Norman R. Klivans was named general manager of our Piezoelectric Division. He had been a driving force behind the marketing efforts of our Brush Instruments Division for the prior six years. He joined Clevite in 1951.

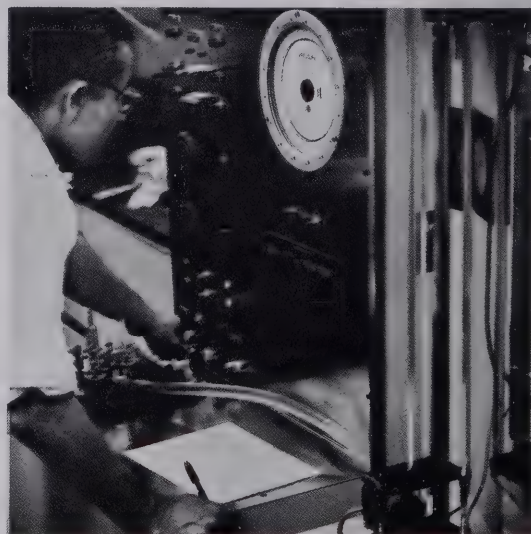
Fred E. Stote gathered long executive experience with two of our country's largest electronics concerns before joining Clevite in 1962. He was recently appointed general manager of our Semiconductor Division.

A. M. Currier, Jr. was appointed director of the new corporate department of marketing. A member of the Clevite organization for 17 years, he formerly directed the replacement marketing activities of Cleveland Graphite Bronze.

John P. Jones joined Clevite as corporate director of personnel. A leader in Cleveland civic affairs, he was formerly in key industrial relations, personnel and public relations capacities with a leading oil company.

Right: Heating coils glow inside a vacuum jar, as an electronics scientist runs a test in our NASA-sponsored research on thin film solar batteries.

Below: Pressurized nitrogen is pumped through a sample powdered metal part to establish its permeability—a basic test in our research on porous electrodes and other controlled permeability materials.







Each year we review Clevite's progress and plans at a two-day meeting of the corporate and divisional management staffs. These meetings are an important part of our continuing internal communications programs.

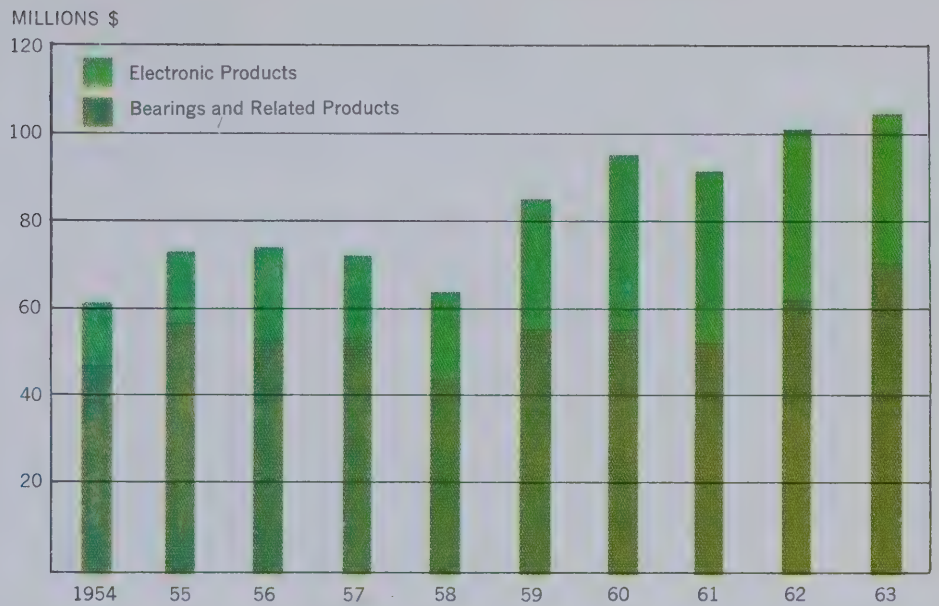
On Corporate Citizenship—

Clevite has long been recognized as a leader in civic affairs in the various communities where it has operations.

Through the Clevite Foundation the corporation makes substantial contributions to support health, education and welfare programs. Direct contributions in 1963 totaled \$193,969. Some \$81,189 of this was for colleges and schools, and the remainder for a variety of health and welfare projects. During the year, Clevite began a program to match contributions made by employees to their colleges.

Sound pension programs have been established to support our retired employees. In the past eleven years, a total of \$12,223,559 has been transferred to trustees of the various plans and more than \$1,250,420 has been paid out to retired Clevite employees.

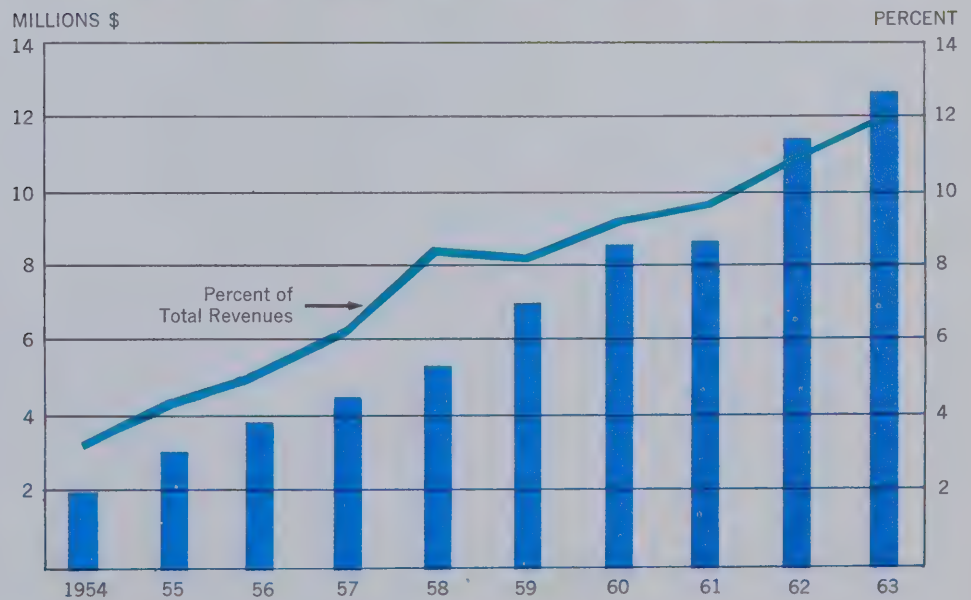
Revenues



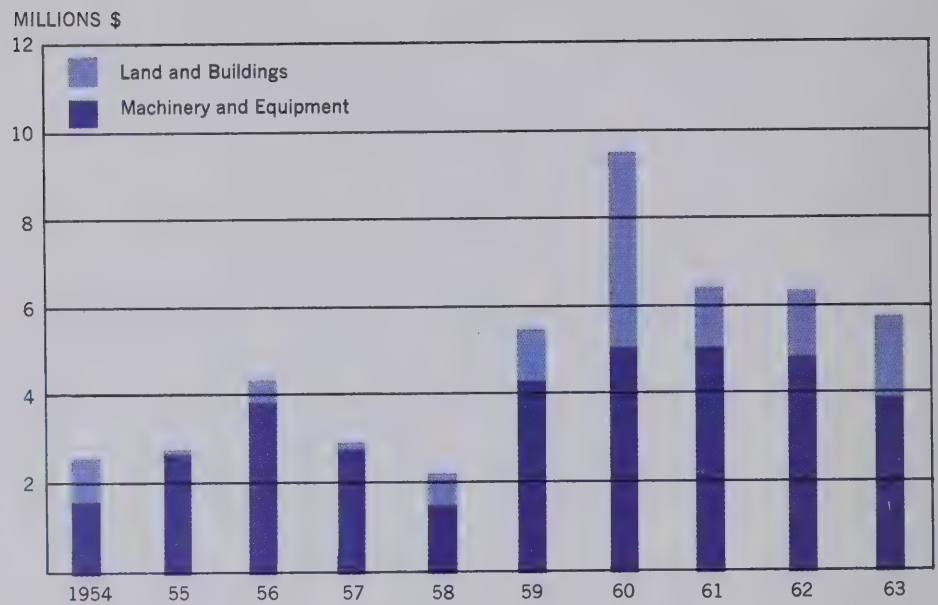
Earnings per Share



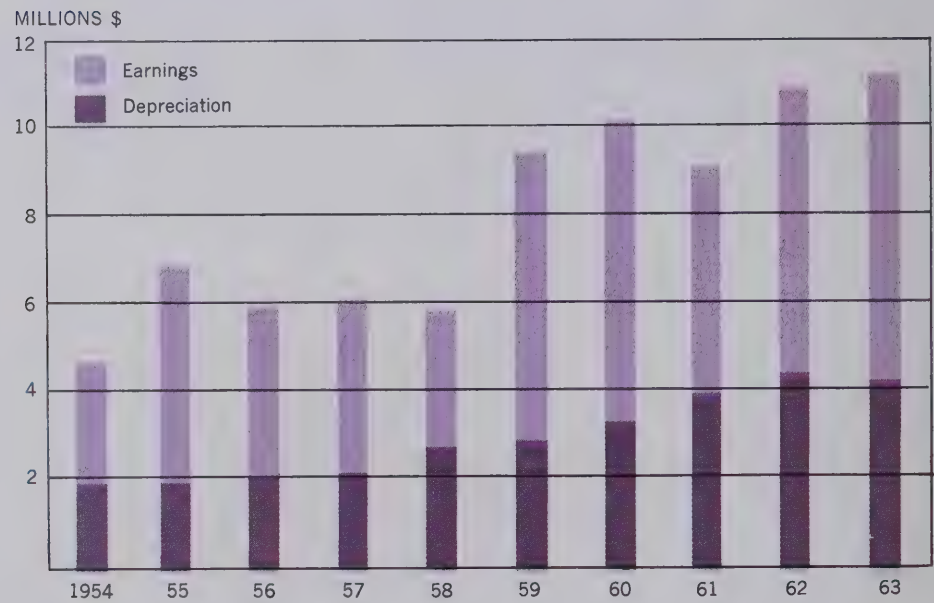
Foreign Revenues



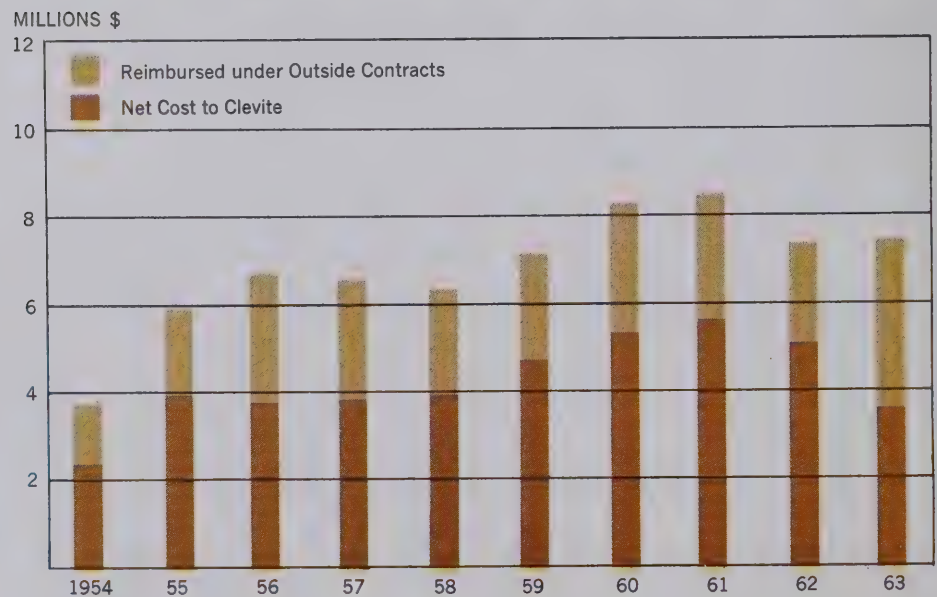
Capital Additions



Cash Flow



Research and Development



Consolidated results of operations

	1963	1962
REVENUES		
Sales of product	\$103,146,863	\$ 99,577,278
Other revenues	<u>2,193,925</u>	<u>1,597,755</u>
Total revenues	<u>105,340,788</u>	<u>101,175,033</u>
COSTS		
Employment costs:		
Wages and salaries	42,688,880	42,112,872
Employee benefits	4,044,688	4,248,750
Materials, supplies, services, etc.	38,380,072	36,083,575
Depreciation of plant and equipment	4,255,102	4,332,675
Real estate and other taxes	1,794,749	1,614,925
Federal and foreign taxes on income	<u>7,250,000</u>	<u>6,220,000</u>
Total costs	<u>98,413,491</u>	<u>94,612,797</u>
EARNINGS	6,927,297	6,562,236
RETAINED EARNINGS, JANUARY 1	<u>41,682,453</u>	<u>37,909,193</u>
	48,609,750	44,471,429
Deduct:		
Dividends paid in cash:		
Preferred stock, \$4.50 per share	115,266	136,315
Common stock, \$1.40 per share	2,665,445	2,652,661
2% stock dividend at market value payable in January, 1964	<u>1,464,701</u>	<u>—</u>
RETAINED EARNINGS, DECEMBER 31. . .	<u>\$ 44,364,338</u>	<u>\$ 41,682,453</u>

See notes on page 25

Consolidated financial position

	December 31	
	1963	1962
CURRENT ASSETS		
Cash	\$ 3,549,780	\$ 4,939,930
Commercial paper	1,039,922	699,882
Receivable from customers and others	15,475,140	12,870,055
Inventories	28,165,486	25,750,103
	<u>48,230,328</u>	<u>44,259,970</u>
CURRENT LIABILITIES		
Note payable	832,500	832,500
Payable to suppliers and others	8,905,413	8,178,867
Federal and foreign taxes on income	4,755,286	3,497,358
	<u>14,493,199</u>	<u>12,508,725</u>
NET WORKING CAPITAL	33,737,129	31,751,245
Property, plant and equipment	32,267,792	31,305,036
Prepaid costs and other assets	3,185,645	2,776,331
Intangible assets acquired in purchases of subsidiaries, less amortization	27,396	39,528
	<u>69,217,962</u>	<u>65,872,140</u>
<i>Deduct:</i>		
Long-term debt, less \$832,500 current portion	6,631,247	7,196,926
Minority interest in subsidiary companies	340,817	319,162
	<u>7,000,000</u>	<u>7,516,088</u>
NET ASSETS	<u>\$62,245,898</u>	<u>\$58,356,052</u>
SHAREHOLDERS' INVESTMENT		
Preferred stock—\$100 par value		
24,031 shares outstanding	\$ 2,403,100	—
28,522 shares outstanding	—	\$ 2,852,200
Common stock—\$1 par value		
1,909,639 shares outstanding	1,909,639	—
1,900,151 shares outstanding	—	1,900,151
38,193 shares to be issued as stock dividend in January, 1964	38,193	—
Capital in excess of par value	13,530,628	11,921,248
Retained earnings	44,364,338	41,682,453
	<u>59,842,798</u>	<u>55,503,852</u>
TOTAL INVESTMENT	<u>\$62,245,898</u>	<u>\$58,356,052</u>

See notes on page 13

Notes to financial statements

INVENTORIES

Inventories are stated at the lower of cost or market. Approximately 12% of total value at December 31, 1963 and 13% at December 31, 1962 represented cost of the metal content of certain inventories as determined by the last-in, first-out method.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is stated at original cost less accumulated depreciation of \$35,622,754 at December 31, 1963 and \$32,137,953 at December 31, 1962.

LONG-TERM DEBT

Long-term debt includes \$5,842,500 of 3½% notes payable to an insurance company. The notes, originally in the principal amount of \$15,000,000, are due in installments of \$832,500 per year from March 1, 1964 to March 1, 1970 and \$847,500 on March 1, 1971.

As of December 31, 1963 the note agreement permitted the Corporation to pay dividends out of retained earnings up to but not exceeding an amount of \$20,430,565.

PREFERRED AND COMMON STOCK

As of December 31, 1963, the authorized stock of the Corporation consisted of 100,000 4½% cumulative preferred shares of which 32,996 were unissued, and 2,500,000 common shares of which 590,361 were unissued. Preferred shares retired pursuant to a requirement of the articles of incorporation are not eligible for reissue. Of the unissued common stock, 92,513 shares were reserved for issuance under the Corporation's stock option plan.

The articles of incorporation provide that each year an amount shall be set aside and expended for the purchase and retirement or redemption of preferred stock. In 1963, an amount of \$470,078 was set aside and 4,662 preferred shares were retired. The same amount is to be set aside in 1964.

During 1963 capital in excess of par value increased in the total amount of \$1,609,380, representing (a) \$1,426,508 excess of fair market value over par value of 38,193 shares of common stock issuable January 23, 1964 as a 2% stock dividend, (b) \$182,644 excess of option price over par value of 9,488 common shares issued on the exercise of stock options, and (c) \$228 discount on preferred shares purchased.

STOCK OPTION PLAN

At December 31, 1962, employees held options on a total of 59,405 shares of common stock. Options were granted in 1963 on 40,800 shares. Options exercised resulted in the issuance of 9,488 common shares during 1963. Options covering 16,300 shares were cancelled in 1963 due to resignations. At December 31, 1963 one hundred seventeen employees held options on a total of 74,417 shares, summarized as follows:

Option date	Price per share	Number of shares
November 20, 1956	\$20.25	18,317
April 1, 1960	47.375	12,300
September 7, 1960	57.00	2,100
June 15, 1961	69.00	5,700
February 7, 1963	38.75	36,000

The total number of common shares which may be issued and sold under the plan may not exceed 150,000. Options to purchase a total of 57,487 shares had been exercised to December 31, 1963. The option price per share represents the market price on the dates the options were granted. Options may be exercised in annual installments over periods starting from two to three years from the option date and ending, in most cases, ten years from the option date.

The effect of the 2% stock dividend payable to holders of record on January 2, 1964 will be to change the price per share on options to approximately \$19.85, \$46.45, \$55.88, \$67.65 and \$37.99 and the number of shares under option to approximately 18,683, 12,240, 2,142, 5,814 and 36,720 on the respective option dates shown above.

RETIREMENT INCOME PLAN

The Corporation and its Canadian operating subsidiary have contributory, trustee pension plans for salaried employees and non-contributory plans for hourly employees. Certain foreign subsidiaries have non-contributory, insured pension plans for salaried employees. In 1963 charges against earnings for funding current and past service totaled \$699,000. The unfunded past service liability at December 31, 1963 was estimated to be \$4,390,000.

CONTINGENCIES

The Corporation is subject to renegotiation for 1962 and 1963 and to other business contingencies. The effect of any adjustments to earnings which may result from these contingencies cannot be determined at this time.

*Opinion
of independent
public accountants*

TO THE BOARD OF DIRECTORS OF CLEVITE CORPORATION

We have examined the consolidated statement of financial position of Clevite Corporation and its subsidiaries as at December 31, 1963, and the related consolidated statement of results of operations for the year then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We made a similar examination for the year ended December 31, 1962.

In our opinion, the accompanying consolidated statement of financial position and consolidated statement of results of operations present fairly the financial position of Clevite Corporation and its subsidiaries at December 31, 1963 and 1962 and the results of their operations for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Dybrand, Ross Bros. & Montgomery

Cleveland, Ohio
January 29, 1964

Ten-year statistics

1963

OPERATIONS (000):

Revenues	\$105,341
Income before income taxes	14,177
Earnings	6,927
Cash dividends:	
Preferred	115
Common	2,665
Stock dividend	2%
Retained earnings	4,147
Property, plant and equipment additions	5,774
Depreciation	4,255

FINANCIAL POSITION AT YEAR END (000):

Current assets	48,230
Current liabilities	14,493
Net working capital	33,737
Property, plant and equipment, gross	67,891
Property, plant and equipment, net	32,268
Long-term debt	6,631
Par value of preferred shares	2,403
Book value of common shares	59,843

PERCENTAGES:

Income before income taxes to:	
Revenues	13.5%
Shareholders' investment (average)	23.5
Earnings to:	
Revenues	6.6
Shareholders' investment (average)	11.5

PER COMMON SHARE OUTSTANDING:

Earnings after preferred dividends	3.57
Cash dividend	1.40
Stock dividend	2%
Book value (year end).	31.33

OTHER YEAR END DATA:

Number of employees	7,313
Number of common shareholders	7,716
Preferred shares	24,031
Common shares (000)	1,910
Common shares (000) to be issued as stock dividend	38

<i>1962</i>	<i>1961</i>	<i>1960</i>	<i>1959</i>	<i>1958</i>	<i>1957</i>	<i>1956</i>	<i>1955</i>	<i>1954</i>
\$101,175	\$91,874	\$95,525	\$86,183	\$64,721	\$72,672	\$75,112	\$73,089	\$60,149
12,782	10,021	13,606	13,894	5,899	7,409	7,672	10,005	5,619
6,562	5,143	6,826	6,494	3,109	3,988	3,972	4,855	2,669
136	157	176	197	211	228	247	263	268
2,653	2,360	2,254	2,137	2,078	2,078	2,078	2,257	2,070
3,773	2,626	4,396	4,160	820	1,682	1,647	2,335	331
6,320	6,438	9,532	5,452	2,186	2,993	4,294	2,764	2,518
4,333	3,938	3,293	2,867	2,794	2,104	2,018	2,034	1,955
44,260	41,112	42,136	43,070	35,839	36,102	36,647	38,004	35,618
12,509	11,069	10,111	10,472	5,055	5,431	5,999	6,375	4,760
31,751	30,043	32,025	32,598	30,784	30,671	30,648	31,629	30,858
63,443	58,570	53,896	45,274	41,109	39,629	37,720	34,199	31,963
31,305	30,269	28,224	22,201	20,147	21,737	21,425	19,868	19,231
7,197	7,944	8,770	9,646	10,178	10,838	11,670	12,503	13,335
2,852	3,338	3,768	4,283	4,563	4,945	5,309	5,812	5,885
55,504	51,551	50,085	43,835	38,032	38,129	38,488	36,838	34,319
12.6%	10.9%	14.2%	16.1%	9.1%	10.2%	10.2%	13.7%	9.3%
22.4	18.3	26.3	30.1	13.9	16.6	17.8	24.1	13.9
6.5	5.6	7.1	7.5	4.8	5.5	5.3	6.6	4.4
11.5	9.3	13.2	14.1	7.3	8.9	9.2	11.7	6.6
3.38	2.63	3.53	3.36	1.60	2.08	2.06	2.54	1.33
1.40	1.25	1.20	1.15	1.15	1.15	1.15	1.25	1.15
29.21	27.24	26.60	23.42	21.05	21.10	21.30	20.38	19.07
7,145	7,167	7,296	7,268	5,746	5,907	6,472	6,907	5,335
7,410	7,406	8,558	8,610	8,335	7,955	7,315	6,579	5,713
28,522	33,382	37,676	42,827	45,634	49,451	53,086	58,123	58,855
1,900	1,893	1,883	1,872	1,807	1,807	1,807	1,807	1,800

CLEVITE

Units

Aerospace Division

The division was formed early in 1963 to manufacture fuel cell electrodes for the Apollo program and to assume responsibility for commercial development of products and techniques used in space exploration projects.

Drawing on Clevite's exceptional skills in manufacturing metal products of controlled permeability or density, the division has since won contracts to supply fuel cell electrodes for Project LEM and is manufacturing titanium transducer masses for use in nuclear submarines. Currently it is the sole supplier of fuel cell electrodes for the Apollo and LEM programs.

Division facilities are located in Cleveland. An expansion program to be completed in March will double floor space to permit more efficient production and add to capacity.

General Offices:

540 East 105th Street
Cleveland, Ohio 44108

John E. Newell, III
General Manager

Brush Crystal Company Limited

Brush Crystal is the leading independent producer of piezoelectric materials and devices in the United Kingdom.

Product lines include quartz crystal components for radio frequency control, Rochelle salt elements for phonograph cartridges and microphone assemblies, piezoelectric ceramics and a specialized range of semi-conductors.

Brush Crystal was founded in 1937 by The Brush Development Company, which was later acquired by Clevite. Clevite became the majority owner in 1962. Close technical liaison is maintained with other Clevite units both in the United States and Europe.

Headquarters and manufacturing plant are at Hythe, Southampton, England. Brush Crystal expects to move to a new building in Southampton early in 1965.

General Offices:

Hythe, Southampton
England

D. John Taysom
Managing Director

Brush Instruments Division

Brush Instruments develops and manufactures advanced electronic recording instruments and components for commercial, aerospace and scientific uses.

Brush is the country's leading producer of direct-writing oscillographic systems. Its Mark 200 recorder is the most accurate and reliable instrument of its kind on the market. Other products include optical oscillographs, two-channel industrial recorders, operations monitors, capable of recording up to 150 events simultaneously, the new Mark 280 wide-channel oscillograph, surface gauging instruments, magnetic recording heads, precision chart paper and other oscillograph supplies.

Division headquarters, production and engineering facilities are in Cleveland. Another important center of advanced development, and product design, is our Western Engineering Division in Pasadena, California.

General Offices:

37th and Perkins
Cleveland, Ohio 44114

John H. Harris
General Manager

Vice President
Clevite Corporation

Cleveland Graphite Bronze Division

Cleveland Graphite was established in 1919 to make graphited bronze bearings for the automobile industry. It later developed and introduced the type of sleeve bearing now the universal standard for automobile engines.

The division is believed to be the world's largest independent manufacturer of sleeve bearings. Other products are electrolytic copper foil, jet and rocket engine seals and railroad journal bearing cartridges.

Currently almost one-third of division sales is to automobile and truck manufacturers for installation in new vehicles; about one-third to various customers for replacement use in older vehicles; and the remainder to customers outside the automobile industry.

Extensive research and development programs are maintained to improve existing products and materials, and to develop new products and materials.

The division headquarters and main plant are in Cleveland. Branch plants are in Bridgeport, Caldwell and McConnelsville, Ohio, and Columbus, North Carolina.

General Offices:

17000 St. Clair Avenue
Cleveland, Ohio 44110

William H. Martin
General Manager

Clevite de Mexico S.A.

Majority owned company producing engine bearings for Mexican and Central American markets.

General Offices:

Apartado Postal 143
Naucalpan, Edo de Mexico
Mexico

Percy B. Babb
General Manager

Clevite Harris Products, Inc.

Thirty-one years' experience in the design of rubber-and-metal parts has enabled Clevite Harris to make significant contributions to the improvement of automobile suspensions through reduction of noise and vibration and elimination of lubrication.

Rubber-and-metal parts include ball joints, bearing mounts, lubricated rubber bearings and other devices. In addition the company compounds, molds and bonds rubber products, and makes magnetic rubber recording belts and fractional horsepower transmission belts.

Because of its research and engineering knowledge and production skill Clevite Harris is in a position to analyze potential applications, design products which will perform precisely, predictably and economically, and produce the parts in volume.

Founded in 1933, the company was acquired by Clevite in 1949. Since that time production and office facilities at Milan, Ohio, and a plant at Napoleon, Ohio, have been greatly expanded.

General Offices:

Lockwood Road
Milan, Ohio 44846

Ralph E. Schey
General Manager

Clevite Limited

Clevite Limited, located in St. Thomas, Ontario, supplies Canadian industry with sleeve bearings, rubber-and-metal parts and powdered metal parts.

The company was established in 1949. The only sleeve bearing manufacturer in the Dominion, it serves both the original equipment and replacement markets. Its bearings are used in all Canadian-built cars as well as in farm equipment, electric motors and other products.

Clevite Limited manufactures a wide range of powdered metal parts. Growing acceptance of these products has necessitated installation of new, high-production equipment.

Warehousing and manufacturing floor space at Clevite Limited's plant was expanded 25% in 1963 and additional land and floor space has been acquired.

General Offices:

1177 Talbot Street
St. Thomas, Ontario
Canada

Matthew J. Fleming, Jr.
General Manager

Clevite-Metall G.m.b.H.

Wholly owned company producing copper foil for European manufacturers of printed electrical circuits.

General Offices:

7831 Eichstetten a.K.
Hauptstrasse 3
Germany

Dr. Karl O. Seiler
General Manager

Clevite Ordnance Division

Clevite Ordnance is engaged in research and development work in the underwater field, primarily for the Department of Defense.

The division's roots go back to 1922, when the Navy's first piezoelectric transducers were produced by a predecessor organization, Brush Laboratories. Since that time the group has made major contributions in torpedo and engine design and has won recognition for other work in underwater acoustics and naval ordnance.

In addition to torpedoes and engines, products include hydrophones, oceanographic equipment, sonic markers, submarine simulators and underwater connectors.

New and advanced engineering facilities for underwater acoustics and torpedo engine testing are located at Columbia Station, Ohio, near Cleveland. Headquarters and manufacturing facilities are in Cleveland. An ocean test station is maintained at Dania, Florida.

General Offices:

540 East 105th Street
Cleveland, Ohio 44108

Thomas E. Lynch
General Manager

Intermetall G.m.b.H.

Intermetall is the leading independent semiconductor producer in Europe.

Acquired by Clevite in 1955, it was the first European company to manufacture silicon transistors on a commercial scale. Its product lines include diodes, transistors, rectifiers and micro-semiconductors. New products are constantly under development. It also acts as the European distributor of Clevite semiconductor products made in the United States.

Headquarters, production, research and development facilities are located in a modern plant at Freiburg, Germany.

General Offices:

Freiburg/Breisgau
Hans-Bunte-Strasse 19
Germany

Dr. Karl O. Seiler
General Manager

Piezoelectric Division

The division manufactures and markets a wide range of piezoelectric products and materials. It is the world's leading manufacturer in this field, and, with the Electronic Research Division, the principal technological authority.

Clevite piezoelectric materials find use in phonograph pickup elements, sonar transducers, headphones, accelerometers, electrical wave filters for communications equipment and ultrasonic equipment for industrial, medical, and laboratory use.

Piezoelectric Division headquarters and plant are at Bedford, Ohio, near Cleveland.

General Offices:

232 Forbes Road
Bedford, Ohio 44014

Norman R. Klivans
General Manager

Semiconductor Division

The division's products include diodes, rectifiers and transistors of various types. Extensive research and development programs are maintained.

Among the most recently introduced products are a high-frequency silicon power transistor, a planar zener diode, and a three-layer trigger diode.

Division headquarters are in Waltham, Massachusetts. The Waltham plant was completed in 1960 and is one of the finest semiconductor manufacturing facilities in the country.

Research, development, and pilot production facilities are located at Palo Alto, California. The Palo Alto plant, completed in 1961, is located near one of the country's top academic centers in semiconductor research.

General Offices:

200 Smith Street
Waltham, Massachusetts 02154

Fred E. Stote
General Manager

Mechanical Research Division

The division devotes most of its efforts to the development of new or improved materials or processes for use in Clevite products. It has developed unusual skills and knowledge in powder metallurgy, controlled permeability, fiber reinforcement and dynamic rubber control.

Research work done by the division resulted in formation of the Aerospace Division as a manufacturing unit skilled in producing specialized powdered metal parts such as fuel cell electrodes. Contributions have also included high temperature rocket nozzles, development of sintered aluminum bearings and improvements in the

rubber compounds used for Clevite's rubber-and-metal parts.

General Offices:

540 East 105th Street
Cleveland, Ohio 44108

Arthur D. Schwoppe
Director

Electronic Research Division

The division conducts basic and developmental research in several areas of solid state physics including piezoelectricity, semiconductors, ferromagnetism and crystal optics.

The division has received worldwide recognition for its work in piezoelectricity. Its activity in this field was the impetus for Clevite's entering the recording oscillograph business. It has also been the basis for improved types of torpedoes, sonar equipment, headphones, accelerometers, electrical wave filters and other components.

Research is conducted for the corporation, for corporate units, and under government contract. The division is located at the Clevite Research Center in Cleveland.

General Offices:

540 East 105th Street
Cleveland, Ohio 44108

Dr. Hans Jaffe
Director

Foreign Affiliates

Bimetal Bearings Limited

Minority owned affiliate producing engine bearings for the Indian automotive industry.

General Offices:

Huzar Gardens
Sembiam
Madras 11
India

Victor A. Watts, *Director*
K. L. Ganapati, *General Manager*

Nippon Dia Clevite Company Limited

Minority owned affiliate producing automotive engine bearings for the Japanese automotive industry.

General Offices:

687, 1-Chome, Mimomi
Narashino-Shi, Chiba-Prefecture
Japan

Chikaharu Hayashi, *President*
T. J. Maloney, *Managing Director*
Yukio Murakami, *Managing Director*

DIRECTORS

TIMOTHY J. CONWAY
EMMETT P. DOWLING
GEORGE E. ENOS
T. KEITH GLENNAN
WILLIAM G. LAFFER
EVELYN L. LYNN
SCOTT MUELLER
H. CHAPMAN ROSE
C. BALDWIN SAWYER
JOHN SHERWIN
GLEN O. SMITH
S. BLACKWELL TAYLOR
A. L. W. WILLIAMS

* * *

JAMES L. MYERS, *Honorary Director and
Chairman Emeritus*

OFFICERS

<i>President</i>	WILLIAM G. LAFFER
<i>Vice President</i>	S. J. BEGUN
<i>Vice President</i>	WILLIAM D. CAMERON
<i>Vice President and Treasurer</i>	O. PERRY GOKAY
<i>Vice President</i>	JOHN H. HARRIS
<i>Vice President</i>	C. CARVER POPE
<i>Vice President</i>	A. L. W. WILLIAMS
<i>Secretary</i>	WILBUR D. PRESCOTT

TRANSFER AGENTS

The Bank of New York
Central National Bank of Cleveland

REGISTRARS

Morgan Guaranty Trust Company of New York
The Cleveland Trust Company

CLEVITE
CORPORATION
17000 St. Clair Avenue, Cleveland, Ohio 44110

